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EXAMINER
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WERNER, DAVID N

ART UNIT	PAPER NUMBER
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2621

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/737,184

Applicant(s)

KURCEREN ET AL.

Examiner

David N. Werner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>20070529, 20070621</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Office Action is in response to communications filed 08 June 2007, in reply to the Office action of 03 May 2007. Currently, claims 1-32 are pending. Of those, claims 1-7, 13-21, and 27 were provisionally rejected for non-statutory double-patenting with copending application 10/798,825, claims 27-32 were rejected under 35 U.S.C. 101 as directed to non-statutory subject matter, claims 1-10 and 13-31 were rejected under 35 U.S.C. 103(a) as obvious over US Patent 5,802,226 A (Dischert et al.) in view of US Patent 6,526,099 B1 (Christopoulos et al.), and claims 11-12 and 32 were rejected under 35 U.S.C. 103(a) as obvious over Dischert et al. and Christopoulos et al., in further view of US Patent 5,477,276 A (Oguro). In addition, the drawings were objected to on formalities.

#### ***Drawings***

2. Corrected drawings were received on 08 June 2007. These drawings are accepted.

#### ***Terminal Disclaimer***

3. The terminal disclaimer filed on 08 June 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of co-pending application 10/798,825 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Response to Arguments***

4. Applicant's arguments filed 08 June 2007 have been fully considered but they are not persuasive. Applicant makes two arguments: first, that Dischert teaches editing decoded video, whereas the present invention does not require the video to be decoded during editing (pg. 8), and second, the combination of Christopolous and Oguro would improperly change the principle of operation of Christopoulos (pg. 9).

5. Regarding the argument that the present invention is distinct from Dischert since Dischert teaches editing a decoded video, while it is true that in Dischert, one of the video sources to be mixed is *partially* decoded, the steps of variable-length decoding, run-length decoding, and dequantizing fail to place the video in a form that is not "a modified bitstream", as claimed in claim 1, or "in transform domain", as claimed in claim 13 and claim 27. Notice that in Dischert, there is no step of performing an inverse DCT transform before mixing. Therefore, both video streams are in a transform domain. It is also noted that figure 4 of the present invention also shows the partial decoding step of inverse quantization before editing a video stream. Therefore, the examiner respectfully maintains the prior art rejections over Dischert.

6. Regarding the argument that combining Christopolous and Oguro would change the principle of operation of Christopolous since Oguro requires separating DC and AC coefficients of a transformed video signal, Christopolous teaches that it was known to extract only selected low-frequency DCT coefficients from a DCT block (column 6, lines 53-65) and only perform operations on these low-frequency coefficients, including, but

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not limited to, only the 4 x 4 low frequency coefficients, or the 2 x 2 low frequency coefficients, if a large reduction is required (column 7, lines 39-49). The DC coefficient of a DCT block is merely the 1 x 1 lowest frequency coefficient. Therefore, the examiner respectfully maintains the prior art rejections over Oguro.

***Claim Rejections - 35 USC § 101***

7. The text of the sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 27-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The open-ended term "comprising" in the second line of claim 27 is not considered sufficient for linking a statutory computer-readable medium with encoded software. An acceptable form of the preamble of claim 27 would be:

A computer-readable medium embodied with a computer program for use  
in a video editing device...

Then, in claims 28-32, the phrase "software application product" would be replaced with the phrase "computer-readable medium".

***Claim Rejections - 35 USC § 103***

9. The text of the sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1-10 and 13-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,802,226 A (Dischert et al.) in view of US Patent 6,526,099 B1 (Christopoulos et al). Dischert et al. teaches a video editor that operates on frequency-domain video (abstract). Regarding the obtaining data from a video bitstream in claims 1, 13, and 18, figure 3A shows VIN video stream from a video source to a memory 330 and mixer 320. The memory and mixer are controlled by control 350. Regarding the modification of video data with additional data in claims 1, 13, 18, and 27, Dischert et al. modifies video data by producing a fade effect from one video clip to another. Then, one scene of the video may serve as primary video data, and a second scene of the video may serve editing data. Regarding the modification of transform-domain video in claims 2, 5-7, 13, 18, and 27, figure 8 shows video data processed through DCT 60 before being input into mixer 80. Regarding the compressed bitstream in claims 4, 14, and 19, figure 6 shows video data processed through run-encoder 64 and variable-length encoder 66, and regarding the quantized data in claims 6, 7, and 17, figure 6 shows video data processed through quantizer 62. Regarding the coded data in claim 7, Dischert et al. discloses that the video data is encoded with an error correction code (ECC) encoder (column 4, lines 55-57).

Regarding the fade to a color in claims 8 and 31 and the fade to black in claim 9, Dischert et al. discloses that video data may be faded to black as part of a transition sequence (column 7, lines 5-9). Regarding the addition of editing data to a bitstream in claims 13, 18, and 27, figure 10A of Dischert et al. shows a first video bitstream input through terminal 100 and a second video bitstream input through terminal 102 and

added by adder 105. Regarding the inverse quantization in claims 14 and 19, figure 7 shows decoder 510 with inverse DCT 76. Regarding the combination of editing data to transform coefficients in claims 15 and 20, mixer 80 takes as input a series of frequency coefficients (column 7, lines 14-16). Regarding the secondary editing in claims 16 and 21, figure 10A shows a two-step mixer that multiplies video signals by a coefficient and then adds them (column 7, lines 1-12).

Regarding the camera in claim 22 and the storage medium in claim 25, figures 3A and 3E show two embodiments of the apparatus of Dischert et al., including camera 310 and VTR 340. Regarding the decoder in claim 24, figure 5 shows video data processed through decoder 510 before output. The label of "Audio" output from D/A converter 504 should be video (column 5, lines 31-38). Regarding the multiplication operation of claims 28 and 30, figure 10A shows a mixer with first multiplier 104 that multiplies a first video stream by coefficient K and second multiplier 102 that multiplies a second video stream by coefficient J (column 6, line 65 – column 7, line 4), and regarding the addition operation of claims 29 and 30, adder 105 adds the signals edited by the two multipliers.

Although Dischert et al. specifies ECC-encoded video data, Dischert et al. is silent on residual video data or error video data. Christopoulos et al. teaches a transcoder that operates on spatial domain or frequency domain (abstract). Regarding the residual data in claims 1, 3, 5-7, 13, 18, and 27-30, Christopoulos et al. operates on video that has been coded with predictive coding. In predictive coding, instead of transmitting every pixel value, instead only the variation between pixels is transmitted

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(column 1, lines 40-49). Regarding the error data in claims 3, 5, 13, and 18, this value is a prediction error from the assumption that pixel values are related in a certain way.

Regarding the receiver in claim 23 and the transmitter in claim 26, Christopoulos et al. incorporates a receiver into the transcoder (column 9, lines 11-13, 19-35), and outputting an encoded video stream via a transmitter (column 2, lines 10-17).

Regarding the software code that provides editing data in claim 27, the transcoder of Christopoulos et al. operates by performing editing operations on a video stream, such as introducing DCT values or motion vectors for an image with a new resolution, and may be implemented in hardware or in software (e.g. column 8, lines 31-32; column 8, lines 66-67). Dischert et al. discloses the claimed invention except for modifying residual error video data. Christopoulos et al. teaches that it was known to perform functions on predictive-coded video data. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to operate on predictive-coded video data as taught by Christopoulos et al., since Christopoulos et al. states in column 1, lines 15-31, that such a modification would allow the transmission of high-quality images over a narrow bandwidth.

Regarding the fade to white in claim 10, Dischert et al. only teaches a fade to black. However, it would have been a matter of obvious design choice to one having ordinary skill in the art to fade to any desired color, since the applicant has not disclosed that fading to any arbitrary color, including white, solves any stated problem or is for any particular purpose, and it appears the invention would perform equally well with fading to white.



11. Claims 11-12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dischert et al. in view of Christopoulos et al. as applied to claims 1 and 27 above, and further in view of US Patent 5,477,276A (Oguro). Although Dischert et al. teaches a video editor that performs basic operations such as a dissolve, a cross-fade, and a fade to black on frequency-domain data, it does not teach advanced editing effects. Oguro teaches a DSP apparatus that performs advanced fading effects. Regarding the fade from one color to another in claims 11 and 32, Oguro can fade in or fade out to any arbitrary color (column 11, lines 22-27; lines 46-51). Regarding the fade to monochrome in claim 12, the fade system of Oguro may operate only on Y (luminance) values and not process C (chrominance) values, thus performing only black-and-white fade operations (column 11, lines 6-21). Dischert et al. in combination with Christopoulos et al. teach the claimed invention except for advanced fading techniques. Oguro teaches that it was known to perform fading techniques such as a fade to color or monochromatic fade. Therefore, it would have been obvious to one having ordinary skill of the art at the time the invention was made to apply the fading of Oguro to the editor of Dischert et al., since Oguro states in column 11, lines 29-51 that such a modification would simplify the circuitry needed in a fading device.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David N. Werner whose telephone number is (571) 272-9662. The examiner can normally be reached on Monday-Friday from 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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DNW

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